

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (previously presented) A method for determining whether a connection event between a base station and a wireless transmit/receive unit (WTRU) should be accepted or rejected, the method comprising:

measuring the interference level I_0 in a candidate timeslot;

measuring the path loss L between the base station and the WTRU;

measuring the total transmit power P_0 of the base station;

determining a thermal noise level θ ;

determining a fading average signal-to-interference ratio (SIR);

obtaining a value G_c , which relates to the link gain between the base station and a WTRU operating in an adjacent cell; and

calculating a ratio R , wherein if the ratio R is above a certain threshold the connection event will be accepted and if the ratio R is below the threshold [it] the connection event will be rejected:

wherein the ratio R is calculated using the following equation:

$$R = \frac{1}{1 - \left(\frac{I_0}{\theta} - 1 \right) \frac{L}{\left(\frac{P_0}{I_0} \right) + \frac{1}{G_c}}} \cdot \text{SIR}.$$

2. (canceled)

3. (previously presented) The method of claim 2 wherein the connection event is a connection addition.

4. (original) The method of claim 3 wherein the threshold is zero.

5. – 6. (canceled)

7. (previously presented) A method for determining whether a connection event between a base station and a wireless transmit/receive unit (WTRU) should be accepted or rejected, the method comprising:

measuring the interference level I_0 in a candidate timeslot;

determining the transmission power P_c of an existing connection that is similar to the connection event;

measuring the total transmit power P_0 of the base station;

determining a thermal noise level θ ;

obtaining a value G_c , which relates to the link gain between a base station and a WTRU operating in an adjacent cell; and

calculating a ratio R , wherein if the ratio R is above a certain threshold the connection event will be accepted and if the ratio R is below the threshold the connection event will be rejected;

wherein the ratio R is calculated using the following equation:

$$R = \frac{1}{1 - \left(\frac{I_0}{\theta} - 1 \right) \frac{\frac{P_c}{I_0}}{\left(\frac{P_0}{I_0} \right) + \frac{1}{G_c}}}.$$

8. (canceled)

9. (previously presented) The method of claim 8, wherein the connection event is a connection addition.

10. (original) The method of claim 9 wherein the threshold is zero.

11. – 12. (canceled)

13. (previously presented) A method for estimating interference variation caused by a connection event between a base station and a wireless transmit/receive unit (WTRU), the method comprising:

obtaining signal parameters for a communications link with a WTRU;

computing a plurality of variation parameters from the signal parameters;

computing an intermediary variable based on the computed variation parameters;

in the case of an addition connection event, using the intermediary variable to compute a ratio of predicted interference and interference without the connection event resulting from the addition;

determining if the ratio exceeds a predetermined maximum value, and if the interference exceeds the predetermined maximum value deeming the interference excessive; and

in the case of the interference value not exceeding the predetermined maximum value level, computing a predicted interference change as a result of the connection event.

14. (original) The method of claim 13, further comprising:
in the case of a deletion connection event, using the intermediary variable to compute the ratio resulting from the deletion; and
computing the predicted interference change as a result of the connection event.
15. (original) The method of claim 13, further comprising:
calculating, as one of the variation parameters, an interference variation parameter based on a ratio of an interference level as one of the signal parameters and a thermal noise level; and
determining whether the interference variation parameter falls below a reference value, and if the interference variation parameter falls below the reference value, setting the interference variation parameter at the reference value.
16. (original) The method of claim 13, further comprising:
calculating, as one of the variation parameters, an interference variation parameter based on an interference level I_0 as one of the signal parameters and a thermal noise level Θ as $s = (I_0 / \Theta) - 1$; and
determining whether the interference variation parameter falls below a reference value, and if the interference variation parameter falls below the reference value, setting the interference variation parameter at the reference value.

17. (original) The method of claim 14, wherein the signal parameters obtained include thermal noise level (θ), interference level (I_0), signal-to-interference ratio (SIR), and at least one parameter related to the system deployment.

18. (previously presented) A method for determining whether a connection event between a base station and a wireless transmit/receive unit (WTRU) should be accepted or rejected, the method comprising:

- measuring the interference level I_0 in a candidate timeslot;
- measuring the path loss L between the base station and the WTRU;
- measuring the total transmit power P_0 of the base station;
- determining a thermal noise level θ ;
- determining a fading average signal-to-interference ratio (SIR);
- obtaining a value G_c , which relates to the link gain between the base station and a WTRU operating in an adjacent cell; and
- calculating a ratio R , wherein if the ratio R is above a certain threshold the connection event will be accepted and if the ratio R is below the threshold the connection event will be rejected:

wherein the ratio R is calculated using the following equation:

$$R = \frac{1}{1 + \left(\frac{I_0}{\theta} - 1 \right) \left(\frac{L}{\frac{P_0}{I_0}} + \frac{1}{G_c} \right) \frac{SIR}{SIR}}.$$

19. (previously presented) The method of claim 18 wherein the connection event is a connection deletion.

20. (previously presented) The method of claim 19 wherein the threshold is zero.

21. (currently amended) A method for determining whether a connection event between a base station and a wireless transmit/receive unit (WTRU) should be accepted or rejected, the method comprising:

measuring the interference level I_0 in a candidate timeslot;

determining the transmission power P_c of an existing connection that is similar to the connection event;

measuring the total transmit power P_0 of the base station;

determining a thermal noise level θ ;

obtaining a value G_c , which relates to the link gain between a base station and a WTRU operating in an adjacent cell; and

calculating a ratio R , wherein if the ratio R is above a certain threshold the connection event will be accepted and if the ratio R is below the threshold the connection event will be rejected;

wherein the ratio R is calculated using the following equation:

$$R = \frac{1}{1 - \left(\frac{I_0}{\theta} - 1 \right) \frac{\frac{P_c}{I_0}}{\left(\frac{P_0}{I_0} \right) + \frac{1}{G_c}}} \quad R = \frac{1}{1 + \left(\frac{I_0}{\theta} - 1 \right) \frac{\frac{P_c}{I_0}}{\left(\frac{P_0}{I_0} \right) + \frac{1}{G_c}}}$$

22. (previously presented) The method of claim 21 wherein the connection even is a connection deletion.

Applicant: Paul Marinier
Application No.: 10/750,130

23. (previously presented) The method of claim 22 wherein the threshold is zero.